Refine Search

Search Results -

Terms	Documents
L1 or L4	23

Database:

```
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins
```

Search:

```
L5
```

[Refine Search]

[Recall Text ◆]   [Clear]   [Interrupt]

Search History

DATE: Monday, September 13, 2004   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB,USPT,USOC; PLUR=YES; OP=OR			
L5	11 or L4	23	L5
L4	L2 same ((configur$5 or process$3) near5 (data or information))	11	L4
L3	L2 same ((configur$5 or prcess$3) near5 (data or information))	1	L3
L2	dock$3 near10 (port near5 (media or medium or disk or disc or (input adj1 output) or (I adj1 O)))	159	L2
L1	dock$3 near10 (port near5 (media or medium))	17	L1

END OF SEARCH HISTORY

h   e b   b cg b   e e ch

Refine Search

Search Results -

Terms	Documents
L5	0

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L6

Refine Search

Recall Text   Clear   Interrupt

Search History

DATE: Monday, September 13, 2004   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR		
L6	L5	0	L6
	DB=PGPB,USPT,USOC; PLUR=YES; OP=OR		
L5	l1 or L4	23	L5
L4	L2 same ((configur$5 or process$3) near5 (data or information))	11	L4
~~L3~~	~~L2 same ((configur$5 or precss$3) near5 (data or information))~~	~~1~~	~~L3~~
L2	dock$3 near10 (port near5 (media or medium or disk or disc or (input adj1 output) or (I adj1 O)))	159	L2
L1	dock$3 near10 (port near5 (media or medium))	17	L1

END OF SEARCH HISTORY

h   e b   b cg b   e e ch

Refine Search

Search Results -

Terms	Documents
L2 and (different near5 type)	36

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L7

[Refine Search]

[Recall Text ⬍] [Clear] [Interrupt]

Search History

DATE: Monday, September 13, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=PGPB,USPT,USOC; PLUR=YES; OP=OR		
L7	l2 and (different near5 type)	36	L7
	DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR		
L6	L5	0	L6
	DB=PGPB,USPT,USOC; PLUR=YES; OP=OR		
L5	l1 or L4	23	L5
L4	L2 same ((configur$5 or process$3) near5 (data or information))	11	L4
~~L3~~	~~L2 same ((configur$5 or prcess$3) near5 (data or information))~~	~~1~~	~~L3~~
L2	dock$3 near10 (port near5 (media or medium or disk or disc or (input adj1 output) or (I adj1 O)))	159	L2
L1	dock$3 near10 (port near5 (media or medium))	17	L1

END OF SEARCH HISTORY

h   e b   b cg b   e e ch

Refine Search

Search Results -

Terms	Documents
5864708.pn. and (dock$3 same port)	1

Database:

```
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins
```

Search:

```
L5
```

Refine Search

Recall Text ⬍   Clear   Interrupt

Search History

DATE: **Monday, September 13, 2004**   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; PLUR=YES; OP=OR		
L5	5864708.pn. and (dock$3 same port)	1	L5
L4	l1 and (dock$3 same port)	1	L4
L3	l1 and (dock$3 or port)	8	L3
L2	l1 and dock$3	2	L2
L1	5802052.pn. or 5825772.pn. or 5845081.pn. or 5887187.pn. or 5987507.pn. or 5930257.pn. or 6006261.pn. or 5864708.pn.	8	L1

END OF SEARCH HISTORY ·

h   e   b   b   cg   b   e   e   ch

Refine Search

Search Results -

Terms	Documents
5802052.pn. or 5825772.pn. or 5845081.pn. or 5887187.pn. or 5987507.pn. or 5930257.pn. or 6006261.pn. or 5864708.pn.	8

Database:

```
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins
```

Search: L1

[Refine Search]

[Recall Text] [Clear] [Interrupt]

Search History

DATE: Monday, September 13, 2004   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; PLUR=YES; OP=OR		
L1	5802052.pn. or 5825772.pn. or 5845081.pn. or 5887187.pn. or 5987507.pn. or 5930257.pn. or 6006261.pn. or 5864708.pn.	8	L1

END OF SEARCH HISTORY

h   e   b   b   cg b   e   e   ch

EAST - [Untitled1:1]

File View Edit Tools Window Help

- Drafts
- Pending
- Active
  - L1: (76) (dock$3 near10 port
  - L2: (27) l1 and (different r
- Failed
- Saved
- Favorites
- Tagged (0)
- UDC
- Queue
- Trash

Search | Init | Browse | Queue | Clear

DBs | USPAT

Default operator: OR

☑ Plurals
☑ Highlight all hit terms initially

BRS I... IS&R... Image Text HTML

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Err
1	BRS	L1	76	(dock$3 near10 port) same ((configur$5 or process$3)	USPAT	2004/09/13 09:53			0
2	BRS	L2	27	l1 and (different near5 (type or kind))	USPAT	2004/09/13 09:54			0

Start Proxima SSO EAST - [Untitled1:...

File View Edit Tools Window Help

Drafts
Pending
Active
  L1: (76) (dock$3 near10 port
  L2: (27) 11 and (different r
Failed
Saved
Favorites
Tagged (0)
UDC
Queue
Trash

| Search | List | Browse | Queue | Clear |

DBs USPAT   ☑ Plurals
Default operator: OR   ☑ Highlight all hit terms initially

11 and (different near5 (type or kind))

BRS I...   IS&R   Image   Text   HTML

	U	1	Document ID	Issue Date	Pages	Title	Current OR	Current XRef
1	☐	☐	US 6701897 B2	20040309	16	Engine fuel delivery management system	123/438	123/492; 123/493
2	☐	☐	US 6497368 B1	20021224	32	Portable data collection	235/472.01	235/449; 235/462.13;
3	☐	☐	US 6439956 B1	20020827	18	RC car device	446/454	446/43; 446/91;
4	☐	☐	US 6161157 A	20001212	12	Docking system	710/109	710/104; 710/303;
5	☐	☐	US 6158613 A	20001212	8	Voice based pharmaceutical container apparatus and	221/3	221/7
6	☐	☐	US 6009247 A	19991228	7	Portable computer network	710/100	709/227; 709/249;
7	☐	☐	US 5961337 A	19991005	9	Universal charging and data communication apparatus	439/141	
8	☐	☐	US 5890997 A	19990406	73	Computerized system for the design, execution, and	482/8	482/9; 482/902;
9	☐	☐	US 5799068 A	19980825	66	Smart phone integration with computer systems	379/93.06	379/357.01; 710/13;
10	☐	☐	US 5799067 A	19980825	67	Smart phone integration with computer systems	379/93.06	379/357.04; 710/301
11	☐	☐	US 5781744 A	19980714	26	Method and apparatus for ensuring safe peripheral	710/304	710/15; 710/302;

Start   Proxima SSO   EAST - [Untitled1...

IEEE HOME | SEARCH IEEE | SHOP | WEB ACCOUNT | CONTACT IEEE

◆IEEE

Membership   Publications/Services   Standards   Conferences   Careers/Jobs

IEEE Xplore®
RELEASE 1.8

Welcome
United States Patent and Trademark Office

Help   FAQ   Terms   IEEE Peer Review | **Quick Links**

» Se

Welcome to IEEE Xplore®

○ Home
○ What Can
   I Access?
○ Log-out

Tables of Contents

○ Journals
   & Magazines
○ Conference
   Proceedings
○ Standards

Search

○ By Author
○ Basic
○ Advanced

Member Services

○ Join IEEE
○ Establish IEEE
   Web Account
○ Access the
   IEEE Member
   Digital Library

IEEE Enterprise

○ Access the
   IEEE Enterprise
   File Cabinet

🖵 Print Format

Your search matched **3** of **1069805** documents.
A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.

Refine This Search:
You may refine your search by editing the current search expression or enter new one in the text box.

| dock* and port and (configur* or process*) | | Search |

☐ Check to search within this result set

Results Key:
JNL = Journal or Magazine   **CNF** = Conference   **STD** = Standard

1 **Experimental study of airflow and particle characteristics of a 300-r POUP/LPU minienvironment system**
Shih-Cheng Hu; Tzong-Ming Wu;
Semiconductor Manufacturing, IEEE Transactions on , Volume: 16 , Issue: 4 , 2003
Pages:660 - 667

[Abstract]   [PDF Full-Text (481 KB)]   **IEEE JNL**

2 **Object model creation from multiple range images: acquisition, calibration, model building and verification**
Beraldin, J.-A.; Cournoyer, L.; Rioux, M.; Blais, F.; El-Hakim, S.F.; Godin, G.;
3-D Digital Imaging and Modeling, 1997. Proceedings., International Conferer Recent Advances in , 12-15 May 1997
Pages:326 - 333

[Abstract]   [PDF Full-Text (1212 KB)]   **IEEE CNF**

3 **Planning and design of floating berths for passenger-only ferry tern**
Joque, D.T.; Yang, F.L.; Demich, L.R.;
OCEANS '99 MTS/IEEE. Riding the Crest into the 21st Century , Volume: 2 , 1 Sept. 1999
Pages:848 - 861 vol.2

[Abstract]   [PDF Full-Text (1248 KB)]   **IEEE CNF**

Home | Log-out | Journals | Conference Proceedings | Standards | Search by Author | Basic Search | Advanced Search | Join IEEE | Web Account |
New this week | OPAC Linking Information | Your Feedback | Technical Support | Email Alerting | No Robots Please | Release Notes | IEEE Online
Publications | Help | FAQ| Terms | Back to Top

h   eee   e eee   g e ch e   ch e   e   c e   e   e c   e

IEEE HOME I SEARCH IEEE I SHOP I WEB ACCOUNT I CONTACT IEEE

Membership   Publications/Services   Standards   Conferences   Careers/Jobs

Welcome
United States Patent and Trademark Office

IEEE

IEEE Xplore®
RELEASE 1.8

IEEE Xplore®
1 Million Documents
1 Million Users

» ABSTRACT PLUS

Help   FAQ   Terms   IEEE Peer Review

Quick Links

Welcome to IEEE Xplore®
○— Home
○— What Can
     I Access?
○— Log-out

Tables of Contents
○— Journals
     & Magazines
○— Conference
     Proceedings
○— Standards

Search
○— By Author
○— Basic
○— Advanced

Member Services
○— Join IEEE
○— Establish IEEE
     Web Account

○— Access the
     IEEE Member
     Digital Library

IEEE Enterprise
○— Access the
     IEEE Enterprise
     File Cabinet

Search Results   [PDF FULL-TEXT 1212 KB]   PREV   NEXT   DOWNLOAD CITATION

Request Permissions
RIGHTS LINK◄❯

Object model creation from multiple range images: acquisition, calibration, model building and verification

Beraldin, J.-A.   Cournoyer, L.   Rioux, M.   Blais, F.   El-Hakim, S.F.   Godin, G.
Inst. for Inf. Technol., Nat. Res. Council of Canada, Ottawa, Ont., Canada;

This paper appears in: **3-D Digital Imaging and Modeling, 1997. Proceedings., International Conference on Recent Advances in**

Meeting Date: 05/12/1997 - 05/15/1997
Publication Date: 12-15 May 1997
Location: Ottawa, Ont. Canada
On page(s): 326 - 333
Reference Cited: 12
Number of Pages: x+353
Inspec Accession Number: 5596210

Abstract:
This paper demonstrates the accuracy of a prototype Laser Range Camera (LRC) developed at the National Research Council of Canada for the creation of models of real objects. A laser survey performed in collaboration with the Canadian Space Agency and NASA is used as a test case. The object selected for this particular test case is the Orbiter **Docking** System (ODS) located at the Kennedy Space Center, Florida. During the laser survey, 128 range (and registered intensity) images were acquired all around the ODS.

search Abstract
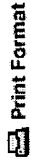
▣ Print Format

These images were then **processed** in our laboratory. A full model of the top **portion** of the ODS was created along with an almost complete model of the ODS. The ODS has a diameter of 1.6 m and a height of 3.9 m. Targets mounted on the top **portion** of the ODS were used to assess the accuracy of the calibration and of the image registration **process**. These targets were measured with a network of theodolites a day prior to the laser survey and used as a reference. With the current calibration and range image registration techniques, an accuracy better than 0.25 mm in X and Y, and, 0.80 mm in Z was achieved. These results compare favorably with the single point accuracy obtained after calibration, i.e., about 0.25 mm in X and Y, and, 0.50 mm in Z. These figures and others should testify on the usefulness of a LRC for accurate model building

Index Terms:
calibration   image registration   solid modelling   virtual reality   calibration   image registration   **process**   laser survey   model building   multiple range images   object model creation   orbiter   docking system   prototype laser range camera   single point accuracy   theodolites

Documents that cite this document
Select link to view other documents in the database that cite this one.

Search Results   [PDF FULL-TEXT 1212 KB]   PREV   NEXT   DOWNLOAD CITATION

search Abstract

IEEE HOME I SEARCH IEEE I SHOP I WEB ACCOUNT I CONTACT IEEE

Membership   Publications/Services   Standards   Conferences   Careers/Jobs

Welcome
United States Patent and Trademark Office

◈IEEE

IEEE Xplore®
RELEASE 1.8

IEEE Xplore®
1 Million Documents
1 Million Users

» ABSTRACT PLUS

Help   FAQ   Terms   IEEE Peer Review   **Quick Links** ▸

Search Results   [PDF FULL-TEXT 481 KB]   NEXT   DOWNLOAD CITATION

Request Permissions
RIGHTSLINK〈〉

Welcome to IEEE *Xplore*
○- Home
○- What Can I Access?
○- Log-out

Tables of Contents
○- Journals & Magazines
○- Conference Proceedings
○- Standards

Search
○- By Author
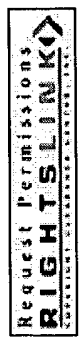○- Basic
○- Advanced

Member Services
○- Join IEEE
○- Establish IEEE Web Account
○- Access the IEEE Member Digital Library

IEEE Enterprise
○- Access the IEEE Enterprise File Cabinet

Experimental study of airflow and particle characteristics of a 300-mm FOUP/LPU minienvironment system

Shih-Cheng Hu   Tzong-Ming Wu
Dept. of Air-Conditioning & Refrigeration Eng., Nat. Taipei Univ. of Technol., Taiwan

This paper appears in: **Semiconductor Manufacturing, IEEE Transactions on**

Abstract:
This study examines the airflow and particle characteristics of a front opening unified pod/load **port** unit (FOUP/LPU) minienvironment system. The airflow and particle number were measured by using a three-dimensional ultrasonic anemometer and an He-Ne laser airborne particle counter, respectively. A large vortex is produced below an extracted wafer in the minienvironment. This vortex extends to the lower part of the minienvironment and reaches the door opener of the LPU. Particles produced on the moving parts of the LPU were carried to the back surface of the wafer, which were at the lowest position (the first wafer). How the open ratio of the perforated plate of the minienvironment affects the pressure difference between the minienvironment and

search Abstract

Print Format

surrounding environment and the airflow through the minienvironment was determined. The thoroughly elucidated information is useful for mitigating contamination when planning a fabrication line and designing a production tool.

Index Terms:

clean rooms   integrated circuit manufacture   semiconductor **process** modelling   turbulence   vortices   300 mm   POUP/LPU minienvironment system   airflow characteristics   airflow patterns   contamination control   cost-effective wafer **docking**   fabrication line planning   front opening unified   pod/load **port** unit   large vortex   laser airborne particle counting   particle characteristics   pressure   difference   production tool design   three-dimensional ultrasonic anemometry

Documents that cite this document
There are no citing documents available in IEEE Xplore at this time.

Reference list:

1, *I300I 300 mm Equipment Performance Metrics* Austin, TX: International SEMATECH, 1996.

2, *Asyst Standard Mechanical Interface Indexer (SMIF-INX) 2200 Evaluation* Austin, TX: International SEMAECH, Technology Transfer #98053510 A-TR, 1998.

3, S. Abu-Zaid, "Airflow analysis of various LPT 2200 configuration," in *Proc. 43th IES Annu. Tech. Meeting*: Inst. of Environment Sci., 1997, pp. 139-147. [Buy Via Ask*IEEE]

4, H. Schneider, P. Fabian, R. Sczepen, S. Hollemann, and A. Honold, "Air flow modeling and testing of 300 mm minienvironment/load port system," in *Proc. 44th IES Annu. Tech. Meeting*: Inst. of Environment Sci., 1998, pp. 411-418. [Buy Via Ask*IEEE]

5, Y. Kobayashi, S. Kobayashi, K. Tokunaga, K. Kato, and T. Minami, "Particle characteristics of 300-mm minienvironment (FOUP and LPU)," *IEEE Trans. Semiconduct. Manufact.*, vol. 13, pp. 259-263, Aug. 2000. [Abstract] [PDF Full-Text (112KB)]

6, *Asyst Technologies SMIF-300 FL$^{\rm TM}$ Evaluation* Austin, TX: International SEMAECH, Technology Transfer #97103378A-TR, 1997.

search Abstract

7, *Integrated Minienvironment Design Best Practices* Austin, TX: International SEMAECH, Technology Transfer #9903693A-ENG, 1999.

8, H. Seita, A. Fujii, T. Suruki, S. Kimoto, O. Shippou, K. Fujiwara, and K. Tokunaga, "Improvemnet of 300 mm FOUP mini-environment," in *2001 IEEE Int. Semiconductor Manufacturing Symp.*, 2001, pp. 503-506. [Abstract] [PDF Full-Text (283KB)]

Search Results   [PDF FULL-TEXT 481 KB]   NEXT   DOWNLOAD CITATION

L1: Entry 7 of 8   File: USPT   Oct 20, 1998

US-PAT-NO: 5825772
DOCUMENT-IDENTIFIER: US 5825772 A

TITLE: Distributed connection-oriented services for switched communications
networks

DATE-ISSUED: October 20, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dobbins; Kurt	Bedford	NH		
Grant; Thomas A.	Derry	NH		
Ruffen; David J.	Salem	NH		
Kane; Laura	Merrimack	NH		
Len; Theodore	Amherst	NH		
Andlauer; Philip	Londonderry	NH		
Bahi; David H.	Manchester	NH		
Yohe; Kevin	Amherst	NH		
Fee; Brendan	Nashua	NH		
Oliver; Chris	Rochester	NH		
Cullerot; David L.	Manchester	NH		
Skubisz; Michael	Durham	NH		

US-CL-CURRENT: 370/396; 370/401, 370/410

ABSTRACT:

Method and apparatus providing connection-oriented services for packet switched
data communications networks. Directory services include distributed discovery of
MAC addresses and protocol alias addresses. Topology services include a link state
topology exchange among switches, which provides each switch with a complete
topology graph of the network. This enables an access switch receiving a data
packet to determine a complete path from a source end system to a destination end
system. Another service includes resolution of broadcast frames to unicast frames,
in order to reduce the amount of broadcast traffic. Policy restrictions may be
applied prior to connection setup. Path determination services enable multiple
paths from a source to a destination. Connection management includes source routed
mapping of connections on the desired path. A distributed call rerouting service is
provided wherein if a link on an active path fails, each switch receives a topology
change notification and unmaps any connection involving the failed link. A
broadcast/unknown service provides restricted flooding of nonresolvable packets.
Furthermore, connection-oriented switching is provided based on the source and
destination MAC addresses as a connection identifier. Still further, resolution of
networks outside the switch domain is enabled by access switches listening for
network and server route advertisements and maintaining best routes to said
networks and servers. The best route metrics may be combined with best path metrics
to determine a path from a first access switch to an egress switch connected to the

h   e b   b cg b cc   e

☐ ▓ Generate Collection ▓ | Print |

L2: Entry 1 of 3   File: USPT   Dec 21, 1999

US-PAT-NO: 6006261
DOCUMENT-IDENTIFIER: US 6006261 A
** See image for Certificate of Correction **

TITLE: Internet protocol assists using multi-path channel protocol

DATE-ISSUED: December 21, 1999

INT-CL: [06] G06 F 13/00

US-CL-ISSUED: 709/224; 709/236, 370/400, 370/402
US-CL-CURRENT: 709/224; 370/400, 370/402, 709/236

FIELD-OF-SEARCH: 395/200.54, 395/200.75, 395/200.65, 395/200.69, 395/200.48,
395/200.66, 370/392, 370/402, 370/400, 370/390, 709/224, 709/245, 709/235, 709/239,
709/218, 709/236

h   e b   b g ee e f   c   e e   e   ge

external network.

29 Claims, 31 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 20

h   e b   b cg b   cc   e

File   Edit   View   Tools   Window   Help

US-PAT-NO: 5961337

DOCUMENT-IDENTIFIER: US 5961337 A

TITLE: Universal charging and data communication apparatus

---------- KWIC ---------

Brief Summary Text - BSTX (6):
   Consequently, there is a need for a standardized universal electrical and
data communication port which can be used with a variety of portable computer
and docking configurations and eliminates the need for a customized
configuration of electrical contacts and data communication links for each new
data terminal design.

Brief Summary Text - BSTX (10):
   The dock employing the universal connector according to the present
invention can be configured in a number of ways to accommodate either a single
hand-held data terminal, multiple data terminals of the same type, or multiple
data terminals of different types, etc. The docking apparatus can be of a
stationary type, i.e., mounted on a table, wall, or other stationary fixture,
or may be a mobile dock for use in a vehicle such as a delivery truck,
forklift, etc., allowing charging via a vehicle's electrical system and/or data
communication with a LAN or WAN, peripheral devices such as fax, modem, optical
readers, printers, and the like.

US005961337A

United States Patent [19]

Kordes

[11] Patent Number:	**5,961,337**
[45] Date of Patent:	**Oct. 5, 1999**

[54] **UNIVERSAL CHARGING AND DATA COMMUNICATION APPARATUS**

[75] Inventor: Kurt A. Kordes, Pleasanton, Calif.

[73] Assignee: Norand Corporation, Cedar Rapids, Iowa

[21] Appl. No.: 08/977,073

[22] Filed: Nov. 24, 1997

Related U.S. Application Data

[60] Provisional application No. 60/031,502, Nov. 27, 1997.

[51] Int. Cl.⁶ H01R 13/44
[52] U.S. Cl. 439/141
[58] Field of Search 439/141, 140, 439/63

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,773,032	9/1988	Uehara et al.	364/709.04
5,052,943	10/1991	Davis	439/357
5,167,516	12/1992	Tan et al.	439/141
5,238,413	8/1993	McCaffrey et al.	439/79
5,281,165	1/1994	McClancy et al.	439/510
5,584,713	12/1996	Kato et al.	439/188
5,736,782	4/1998	Schairer	257/679
5,779,491	7/1998	Nagano et al.	439/141

Primary Examiner—Neil Abrams
*Assistant Examiner*—T C Patel
Attorney, Agent, or Firm—Suiter & Associates PC

[57]   **ABSTRACT**

A universal recharging and data communication apparatus for electrically and communicatively connecting a hand-held or portable data terminal with a data terminal docking unit comprises mating modules for electrical coupling and data or signal communication. The design of data terminals and docking stations is simplified and the need for a specialized or customized arrangement for the electrical and data communication interface is eliminated by providing the necessary electrical and data links together. In a preferred embodiment, the data communication is provided by a plurality of pins and mating contacts whereby a moveable housing protects the pins when a data terminal is not in the data terminal dock.

18 Claims, 4 Drawing Sheets

File   Edit   View   Tools   Window   Help
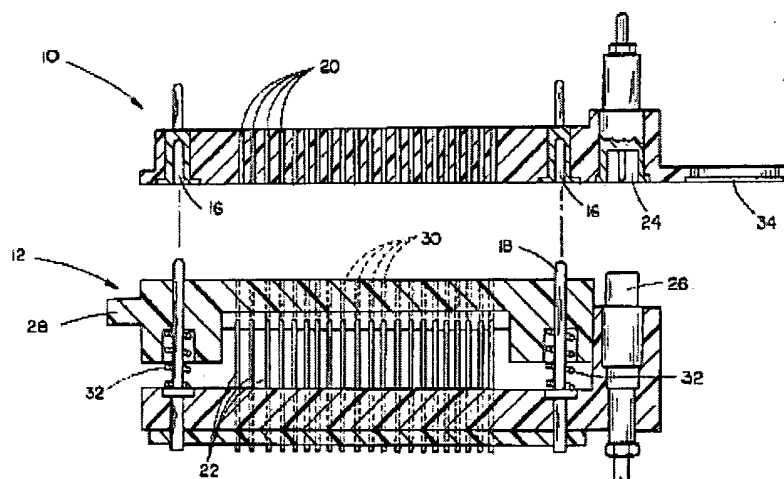
US-PAT-NO: 5781744

DOCUMENT-IDENTIFIER: US 5781744 A

TITLE: Method and apparatus for ensuring safe peripheral
                        connection

---------- KWIC ---------

Claims Text - CLTX (5):
   wherein the data processing system is a docking station, and the peripheral
port is a docking port.

Claims Text - CLTX (9):
   wherein a plurality of different types of devices can peripheral port, and

Claims Text - CLTX (89):
   wherein the data processing system is a docking station, and the peripheral
port is a docking port.

Claims Text - CLTX (95):
   wherein the data processing system is a docking station and the port is a
docking port.

Claims Text - CLTX (106):
   wherein the data processing system is a docking station and the port is a
docking port.

US005781744A

United States Patent [19]

Johnson et al.

[11] **Patent Number:**   **5,781,744**

[45] **Date of Patent:**   **Jul. 14, 1998**

[54] METHOD AND APPARATUS FOR ENSURING SAFE PERIPHERAL CONNECTION

[75] Inventors: **Mary B. Johnson; Lesley A. Bird; Robert Bailey**, all of San Jose; **Krishna Viswanadham**, Mountain View; **Mark Seibert**, Cupertino, all of Calif.

[73] Assignee: **Apple Computer, Inc.**, Cupertino. Calif.

[21] Appl. No.: 519,545

[22] Filed: Aug. 25, 1995

[51] Int. Cl.⁶ G06F 13/00

[52] U.S. Cl. 395/283; 395/828; 395/835

[58] Field of Search 395/281, 283, 395/309, 750, 830, 831, 835, 836, 838, 882, 284, 828

[56]   References Cited

U.S. PATENT DOCUMENTS

5,317,697	5/1994	Husak et al.	395/283
5,323,291	6/1994	Boyle et al.	361/683
5,386,567	1/1995	Lien et al.	395/700
5,444,644	8/1995	Divjak	395/284
5,463,261	10/1995	Skarda et al.	307/131
5,473,499	12/1995	Weir	361/58
5,515,515	5/1996	Kennedy et al.	395/283
5,526,493	6/1996	Shu	395/281
5,548,782	8/1996	Michael et al.	395/835
5,564,024	10/1996	Pemberton	395/283
5,594,873	1/1997	Garrett	395/281
5,594,874	1/1997	Narayanan et al.	395/284
5,608,877	3/1997	Sang et al.	395/284

OTHER PUBLICATIONS

Wilson, Ron; "PicoPower eyes hot-docking." Electronic Engineering Times No. 858. p. 14, Jul. 24, 1995.
Morgenstern, David; "Power catches PCI wave with new line of clones." MacWeek vol. 9, No. 36, Sep. 11, 1995.

Primary Examiner—Glenn A. Auve
Attorney, Agent, or Firm—Beyer & Weaver, LLP

[57]   **ABSTRACT**

An input/output interface apparatus that allows a computer system to have less ports and greater safety with the connection of peripheral devices to the ports is disclosed. The input/output interface apparatus enables the computer system to supply multiple bus standards to a single flexible port of the computer system. The input/output interface apparatus permits safe connection of a peripheral device to a port of the computer system when the computer system is powered-on (so called hot-plugging or hot-docking).

45 Claims, 13 Drawing Sheets
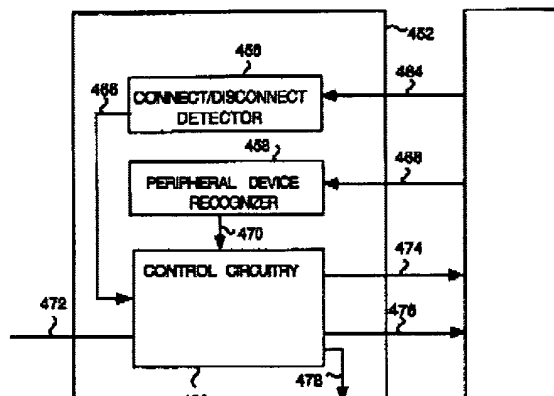
☐   ▨▨▨ Generate Collection ▨▨▨ │Print│

      L3: Entry 1 of 1   File: USPT   Jan 26, 1999

DOCUMENT-IDENTIFIER: US 5864708 A
TITLE: Docking station for docking a portable computer with a wireless interface

Brief Summary Text (11):
In various embodiments of the present invention, the wireless transceiver transmits
and receives infrared signals. Alternatively, other media may be used such as
optical fibers, radio signals or some other wireless media.

Brief Summary Text (12):
The wireless communication may be established between the docking station and the
portable computer in a variety of ways. For example, an optical cable may be used
to connect the docking station to the portable computer. Alternatively, the docking
station may include a flat pad on which is placed the portable computer. In one
embodiment, the flat pad includes both an infrared transceiver and a low profile
inductor. The low profile inductor is used to provide power to the portable
computer.

Drawing Description Text (6):
FIG. 6 shows a docking station and a portable computer communicating using an
optical fiber in accordance with an alternate preferred embodiment of the present
invention.

Drawing Description Text (7):
FIG. 7 shows a docking station and a portable computer communicating using wireless
communication and an optical fiber in accordance with another alternate preferred
embodiment of the present invention.

Detailed Description Text (2):
FIG. 1 shows a block diagram of a docking station 62 which provides for wireless
communication with a portable computer 61. A wireless transceiver 63 within
portable computer 61 communicates with a wireless transceiver 64 within docking
station 62. For example, communication is done using an Infrared Data Association
(IrDA) standard infrared data link or some other protocol for optical
communication. Alternate to optical transmission, other transmission media may be
used. For example, radio frequency transmissions or other wireless transmission
technology may be used in place of optical transmission.

Detailed Description Text (11):
FIG. 6 shows another embodiment in which a portable computer 40 is connected to a
docking station 41 by a cable 48. Cable 48 includes for example optical fibers. In
addition, cable 48 may include a power line (DC or AC). Cable 48 connects to a
single connect point on portable computer 40. Docking station 41 includes, for
various ports, a physical connector 42, a physical connector 43, a physical
connector 44, a physical connector 45, a physical connector 46 and a physical
connector 47.

Detailed Description Text (13):
Optionally, infrared transceiver 53 may include a large enough array of optical

h   e b   b g ee e f   c   e   f   e   ge

fibers so that a communication link may be established between flat pad 51 and
portable computer 40 for a large alignment range. This is done, for example, by
spreading the fibers at flat pad 51 into a wide pattern. Alternatively, if desired,
logical alignment could be used over the large alignment range. Logical alignment
is accomplished, for example, by interrogating the array of receiving fibers in
infrared transceiver 53 to determine which receptors are receiving transmission
from portable computer 40. This would determine which transmitting and receiving
fibers are used by infrared transceiver 53 to communicate with portable computer
40.

Detailed Description Text (15):
Alternatively, flat pad 51 may be connected to portable computer 40 through an
optical cable as described above.

Detailed Description Text (18):
As shown in FIG. 7, flat pad 51 is connected to docking station 41 by a cable 58.
Cable 58 includes for example optical fibers. In addition, cable 58 may include a
power line (DC). Physical connectors 42-47 for various ports are included in
docking station 41. Alternatively, docking station 41 may be implemented within
flat pad 51 so that the physical connections for the various ports are placed at,
for example, a rear end of flat pad 51.

CLAIMS:

8. A portable computing system as in claim 7 additionally comprising:

an optical cable for connecting the docking station to the portable computer.

19. A docking station as in claim 15 additionally comprising:

an optical cable for connecting the docking station to the portable computer.

h   e   b   b   g   ee   e f   c   e   f   e   ge

☐   Generate Collection   Print

L7: Entry 1 of 1   File: USPT   Dec 21, 1999

DOCUMENT-IDENTIFIER: US 6006261 A
** See image for Certificate of Correction **
TITLE: Internet protocol assists using multi-path channel protocol

Brief Summary Text (8):
Three basic methods are now available to interconnect both local and remote area
networks to one another as to provide wide used access and remote information
exchange capabilities. These three methods are 1) bridges or data-link devices that
connect similar networks together; 2) routers that perform routing services by
maintaining a routing table in each host; and 3) gateway devices that carry out
protocol conversions and other connectivity functions. Typically, a device driver
for the gateway is provided with modems or other physical ports that can be linked
to switched communication WANs.

Brief Summary Text (10):
In the existing mechanisms, gateway devices are implemented on top of the LAN
device drivers as a switched communications device interface. The user
initialization of the communication link-up procedure redirects the user hardware
commands to the gateway. The communications interface in the gateway driver then
institutes and maintains the switched communications link, diverting hardware
resources of the driver to do so. The connection and access procedures are then
executed using the gateway ports and modems in order to link the user's system with
the switched communications network. A remote connection is established through the
LAN/WAN which sets up a point to point configuration through the port along the
communication line between the user and the communications device in use.

h   e b   b g e e e f   c   e   f   e   ge

☐ | Generate Collection | |Print|

L10: Entry 6 of 11   File: USPT   Sep 18, 2001

DOCUMENT-IDENTIFIER: US 6290517 B1
TITLE: Fold out port group for portable computer

Detailed Description Text (6):
The housing, in one embodiment, defines a rectangular parallelepiped shape having a
second or lower surface 107 defining the bottom of the housing and four side or
edge surfaces 110 defining the perimeter. It is noted that throughout this
specification, the terms upper, lower, front, back, side, and the like are used to
describe the illustrated embodiments. These terms are provided for descriptive
purposes only and by no means limit the scope of the invention. To simplify the
discussion, the edge surfaces 110 will be specifically identified as front surface
110f, rear surface 110r, and side surface 110s. A flip-up display screen 112 is
hingedly connected to the housing 108 generally along the intersection of the upper
surface 106 and the rear surface 110r. The rear surface 110r comprises various I/O
ports 114 necessary to interface the computer 100 to external devices (not shown).
It is noted that while different port configurations are shown, they are
generically referred to herein as input/output or "I/O ports." They may include
ports adapted for most any device and utilizing most any communication protocol
including: RS-232, IEEE 1394, parallel, infrared, PS/2, USB, audio/video, RJ45
(network), RJ-11 (modem), small computer system interface (SCSI), national
television standards committee (NTSC), and various proprietary connectors (docking
station, port replicator) to name a few.

h   e b   b cg b   cc   e

☐ [Generate Collection]   [Print]

L10: Entry 6 of 11   File: USPT   Sep 18, 2001

US-PAT-NO: 6290517
DOCUMENT-IDENTIFIER: US 6290517 B1

TITLE: Fold out port group for portable computer

DATE-ISSUED: September 18, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; Glen J.	Sioux City	IA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Gateway, Inc.	North Sioux City	SD			02

APPL-NO: 09/ 375327   [PALM]
DATE FILED: August 17, 1999

INT-CL: [07] H01 R 13/44

US-CL-ISSUED: 439/131
US-CL-CURRENT: 439/131

FIELD-OF-SEARCH: 439/131, 439/946, 439/946.2, 439/676, 439/638, 439/344

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

[Search Selected]   [Search ALL]   [Clear]

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5538442	July 1996	Okada	439/676
☐	5547401	August 1996	Aldous et al.	439/676
☐	5598319	January 1997	Lee	361/684
☐	5634802	June 1997	Kerklaan	439/131
☐	5773332	June 1998	Glad	439/344
☐	5975927	November 1999	Giles	439/131
☐	6093038	July 2000	Chen et al.	439/131

h   e b   b g e e e f   c   e   f   e ge

ART-UNIT: 289

PRIMARY-EXAMINER: Abrams; Neil

ASSISTANT-EXAMINER: Duverne; J. F.

ATTY-AGENT-FIRM: Schwegman, Lundberg, Woessner & Kluth, P.A. Cool; Kenneth J.

ABSTRACT:

A notebook computer incorporating a fold out port group incorporating a plurality
of I/O ports is herein provided. The port group is hingedly attached to the
computer and pivots between a first, stored position and a second, extended
position. In the second, extended position, the port group permits convenient
access to the ports thereon and further defines a leg to elevate one end of the
computer. Ports may be accessible while the port group is in the first, stored
position as well. In one embodiment, the port group, while in the first position,
is stored within a slot on the bottom of the computer housing. In another
embodiment, the port group selectively covers the rear surface of the computer in
the stored position and pivots to expose the rear surface when placed in the
extended position. The port group may be interchangeable with other port groups to
customize the computer for a particular market or particular application.

21 Claims, 13 Drawing figures

h   e b   b g ee ef   c   e   f   e   ge

☐ [Generate Collection] [Print]

    L5: Entry 3 of 23   File: PGPB   Jul 29, 2004

DOCUMENT-IDENTIFIER: US 20040148445 A1
TITLE: Docking station for portable computer

CLAIMS:

20. The machine-readable medium of claim 17, wherein the docking station comprises
a docking port, the operations further comprising: determining whether the portable
computer is physically connected to the docking station based on a state of a
ground connection pin of the docking port.

h   e b   b cg b   cc   e

☐ ▓▓ Generate Collection ▓▓ |Print|

L5: Entry 3 of 23   File: PGPB   Jul 29, 2004

PGPUB-DOCUMENT-NUMBER: 20040148445
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040148445 A1

TITLE: Docking station for portable computer

PUBLICATION-DATE: July 29, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lee, Cheon-Moo	Suwon city		KR	
Lee, Il-Han	Seoul city		KR	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
SAMSUNG ELECTRONIC CO., LTD.	Suwon-city		KR	03

APPL-NO: 10/ 679320   [PALM]
DATE FILED: October 7, 2003

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
KR	2003-4884	2003KR-2003-4884	January 24, 2003

INT-CL: [07] G06 F 13/12

US-CL-PUBLISHED: 710/072
US-CL-CURRENT: 710/72

REPRESENTATIVE-FIGURES: 2

ABSTRACT:

A network connection state can be conveniently changed to a wired or a wireless
connection state according to whether a portable computer body is attached to a
docking station including an Access Point part or not.

h   e b   b g ee e f   c   e   e   ge

☐   Generate Collection | Print |

L5: Entry 6 of 23   File: PGPB   Aug 28, 2003

DOCUMENT-IDENTIFIER: US 20030163625 A1
TITLE: Switch architecture independent of media

Abstract Paragraph:
A network device for handling data and a method for handling data in a network
device are disclosed. The network device includes at least one media port and at
least one high speed docking station, communicating with the at least one media
port. At least one master is provided in the network device, where the at least one
master is connected to the at least one high speed docking station. The master is
configured to handle and process data received by the at least one media port and
passed to the master through the at least one high speed docking station. The
network device is configured to handle media ports of different media types. Thus,
the device can handle data received through different media ports that have
different media types with the same master, making the network device easily
configured to meet a customer's needs.

Summary of Invention Paragraph:
[0011] According to one aspect of this invention, a network device for handling
data is disclosed. The network device includes at least one media port and at least
one high speed docking station communicating with the at least one media port. At
least one master is connected to the at least one high speed docking station, where
the at least one master is configured to handle and process data received by the at
least one media port and passed to the at least one master through the at least one
high speed docking station. The network device is configured to handle media ports
of different media types.

Summary of Invention Paragraph:
[0012] Additionally, the network device can be configured to handle media ports of
different media types utilizing the same high speed docking station or utilizing
different high speed docking stations. The at least one media port can also tag
incoming data with tags that can be used by the at least one master to categorize
the data. These tags provide information on a source port and a destination port
for the received data and a media type ID for the at least one media port.

Summary of Invention Paragraph:
[0014] Also, the network device can also have at least one high speed docking
station that does not create any back-pressure for incoming data from the at least
one media port. This can be accomplished wherein each media port of the network
device has a maximum bandwidth and the at least one high speed docking station has
a bandwidth that is greater than a sum of each maximum bandwidth of each media port
of the network device.

Summary of Invention Paragraph:
[0017] The network device can include at least two masters and at least two high
speed docking stations, where the masters are connected through a first high speed
docking station and at least one of the masters is connected to the at least one
media port through a second two high speed docking station.

Summary of Invention Paragraph:
[0018] In another aspect of the invention, a method of handling data in a network

h   e b   b cg b   cc   e

device is disclosed. Incoming data is received at a <u>media port and then forwarded</u> <u>to a high speed docking</u> station. The data is packed and passed to a master, where at least a portion of the packed <u>data is processed</u>. The <u>data is forwarded to</u> <u>another media port based on the processed contents of the at least a portion of</u> <u>data</u>. A first media type of the media port is either the same or different from a second media type of the another media port.

Summary of Invention Paragraph:
[0019] The invention is also embodied in a method of handling data in a network device. Incoming data is received at a <u>media port and then forwarded to a high</u> <u>speed docking</u> station. The data is packed and passed to a master, where at least a portion of the packed <u>data is processed</u>. The <u>data is forwarded to another media</u> <u>port based on the processed contents of the at least a portion of data</u>. A first media type of the media port is either the same or different from a second media type of the another media port.

Summary of Invention Paragraph:
[0020] In addition, the method can include forwarding the data to a second high speed <u>docking station communicating with the another media port</u>. The forwarding step can also include passing through a second master and other high speed <u>docking</u> <u>station to reach the destination media port</u> for the data.

Detail Description Paragraph:
[0028] The <u>Docking Station 102 is basically like a "Transit Hall" between the</u> <u>Master and the Media Ports</u> with zero waiting and loss-less byte Transfer. That is to say, that <u>Docking Station does not block or create any Back-Pressure for</u> <u>incoming Bytes from Media Ports</u>. And the <u>Docking Station does not introduce any</u> <u>clock gaps in the Byte stream between Media Ports</u> and master. The Docking Station acts as a facilitator and will simply keep pushing the Bytes from one end to another with appropriate tag bits to identify the start or end of valid Byte streams. The actual Packet formation will be performed by the Master or by the Media Port at their respective ends.

Detail Description Paragraph:
[0029] This <u>Docking Station must have excess bandwidth such that the total is</u> <u>greater than the sum of all of the Media Ports</u> maximum bandwidth. The excess bandwidth is needed to account for the overhead of extra bytes of tag insertion and processing actions performed by it.

Detail Description Paragraph:
[0032] 2. The Packet Lanes transfer data streams between <u>Media ports and the</u> <u>Docking</u> interface;

Detail Description Paragraph:
[0035] The Packet Lane 104 is the passage or a conduit to transfer the information as Packets or as Bytes between individual <u>Media ports and the Docking</u> station. The Packet Lane, in general, will not modify any of the information being transported by it, unless specifically required by an implementation.

Detail Description Paragraph:
[0036] The Packet lane can be implemented as a shared Bus or as a point to point full (or half) duplex bus between a <u>Media port and the Docking</u> station. The exact implementation depends on the bandwidth, latency and other factors as per the specific implementation requirements.

Detail Description Paragraph:
[0037] Implementation examples include point to point and shared bus examples. For point to point, the MAC of each <u>Media port is directly connected to the Docking</u> Station and the <u>Docking Station takes care of steering the packets between the</u> <u>Master and the respective MAC of the Media Port</u>. In a shared bus, a high speed

h   e b   b cg b   cc   e

shared bus interconnects all Media ports and the Docking Station. The shared bus protocol takes care of steering the packets or bytes between with the Media Port and the Docking Station.

Detail Description Paragraph:
[0040] For the un-packing process the packets being sent by the Master to Media ports through the High Speed Dock interface are un-packed into Bytes by the respective Service Agents.

Detail Description Paragraph:
[0042] For example, for a 48 port 100 Mbit+4 port 1 Gigbit integrated Media Module (total aggregate Bandwidth: 17.6 Gig Bits/sec), a Docking Station employing a 10-Gigabit XGMII Mac (maximum bandwidth supported: 20.0 Gig Bits/sec) is integrated within both Master and Media DOCK ends. The Media Ports interface to the Docking Station on dedicated Byte Lanes from each Media Port. The Docking Station at Media Port end continuously multiplex the Byte Lanes onto its XGMII in a round robin fashion. The Docking Station at the Master Module end will receive these Bytes on its end of XGMII interface in a Round Robin way. Similarly, Bytes from Master module will be transferred to the Media Port.

Detail Description Paragraph:
[0043] A Tagging technique, depending upon the implementation requirements, is defined to indicate valid Byte and Source and Destination Media port ID. Depending upon the High Speed link interface used for the Docking Station, the incoming Bytes from the Media ports will be packed into a "Cell Format" (CF). This format (CF) is an implementation requirement specific standard across any Media Type and will provide basic set of information on the Source Media Port ID, the Media Type ID, the Length of Valid Data Bytes and other fields, as needed. The additional fields can contain CRC or checksum and other information if there is availability of excess Bandwidth.

Detail Description Paragraph:
[0044] The Media port block is a collection of "n" ports, consisting of any combination of the following logic blocks integrated in it: PHY, MAC and Packet or Information Processing Logic. The value "n" is dependent more on the silicon implementation of the Master in terms of capability of the Master to provide "n" Service agents and corresponding Memory and logic blocks. It also depends on the fact that the maximum bandwidth supported by Docking station must be greater than aggregate bandwidth of "n" media port blocks.

Detail Description Paragraph:
[0054] The architecture of the present invention provides an innovative solution for multiple applications, thereby achieving the following goals. The architecture is universal and has a broad application range from Multimedia, Networking, Storage. The architecture is also unique and allows for a fast time to market. The architecture is easy to adapt to any new MAC/PHY technology. The architecture is also scalable such that multi master stacks can provide bigger configuration solutions. Such an embodiment is illustrated in FIG. 2, with multiple Masters 201 connected to Media Ports 203 through high speed Docking Station 202 through Packet Lanes 204.

CLAIMS:

1. A network device for handling data comprising: at least one media port; at least one high speed docking station communicating with said at least one media port; and at least one master connected to said at least one high speed docking station, said at least one master configured to handle and process data received by said at least one media port and passed to said at least one master through the at least one high speed docking station; wherein said network device is configured to handle media ports of different media types.

h   e b   b cg b   cc   e

2. A network device for handling <u>data as recited in claim 1, wherein said network</u> <u>device is configured</u> to handle <u>media ports of different media types utilizing the</u> <u>same at least one high speed docking</u> station.

3. A network device for handling data as recited in claim 1, wherein at least one high speed docking station comprises at least two high speed <u>docking stations and</u> <u>said network device is configured to handle media ports of different media types</u> <u>utilizing different high speed docking</u> stations of said at least two high speed docking stations.

5. A network device for handling data as recited in claim 1, wherein said at least one high speed <u>docking station does not create any back-pressure for incoming data</u> <u>from said at least one media port</u>.

6. A network device for handling data as recited in claim 5, wherein each <u>media</u> <u>port of the network device has a maximum bandwidth and said at least one high speed</u> <u>docking station has a bandwidth that is greater than a sum of each maximum</u> <u>bandwidth of each media port</u> of the network device.

22. A network device for handling data as recited in claim 1, wherein said at least one master comprises at least two masters and said at least one high speed docking station comprises at least two high speed docking stations, wherein said at least two masters are connected by a first of said at least two high speed <u>docking</u> <u>stations and at least one of said at least two masters is connected to said at</u> <u>least one media port through a second of said at least two high speed docking</u> stations.

24. A method of handling data as recited in claim 23, wherein said <u>media port</u> <u>further comprises a port and a packet lane connected to said docking</u> station and wherein said step of forwarding said data to a high speed docking station comprises forwarding data through the packet lane to the docking station.

27. A method of handling data as recited in claim 23, wherein the step of forwarding said data to another <u>media port comprises forwarding said data to a</u> <u>second high speed docking station communicating with said another media port</u>.

28. A method of handling data as recited in claim 27, wherein the second high speed <u>docking station is connected to a second master and the another media port</u> <u>communicates with a third high speed docking</u> station connected to the second master and said forwarding occurs between the first master, the second high speed docking station, the second master and the third high speed docking station.

h   e b   b cg b   cc   e

☐   Generate Collection | Print |

L5: Entry 6 of 23   File: PGPB   Aug 28, 2003

PGPUB-DOCUMENT-NUMBER: 20030163625
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030163625 A1

TITLE: Switch architecture independent of media

PUBLICATION-DATE: August 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kadambi, Shiri	Los Altos Hill	CA	US	
Ambe, Shekhar	San Jose	CA	US	
Relan, Sandeep	Bangalore		IN	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
Broadcom Corporation				02

APPL-NO: 10/ 079576   [PALM]
DATE FILED: February 22, 2002

INT-CL: [07] G06 F 13/00

US-CL-PUBLISHED: 710/303
US-CL-CURRENT: 710/303

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A network device for handling data and a method for handling data in a network
device are disclosed. The network device includes at least one media port and at
least one high speed docking station, communicating with the at least one media
port. At least one master is provided in the network device, where the at least one
master is connected to the at least one high speed docking station. The master is
configured to handle and process data received by the at least one media port and
passed to the master through the at least one high speed docking station. The
network device is configured to handle media ports of different media types. Thus,
the device can handle data received through different media ports that have
different media types with the same master, making the network device easily
configured to meet a customer's needs.

communications port for operational connection to a docking base; wherein the MCRC must be coupled to the <u>docking base to operate, the docking base comprising a connection port for operationally receiving the connector, whereby media content can be communicated from the docking</u> base through the MCRC to a receiving device.

h   e b   b cg b   cc   e

L5: Entry 14 of 23   File: USPT   Jul 27, 2004

US-PAT-NO: 6767253
DOCUMENT-IDENTIFIER: US 6767253 B1

TITLE: Media-component docking system

DATE-ISSUED: July 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Werner; Shane Robert	Olathe	KS		
Parker; Benjamin James	Overland Park	KS		
Bloomcamp; Eric Michael	Olathe	KS		
Aubrecht; Nolan Christian	Overland Park	KS		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Sprint Communications Company L.P.	Overland Park	KS			02

APPL-NO: 10/ 289030   [PALM]
DATE FILED: November 6, 2002

INT-CL: [07] H01 R 25/00

US-CL-ISSUED: 439/638
US-CL-CURRENT: 439/638

FIELD-OF-SEARCH: 439/638, 439/650, 439/651, 439/652, 439/653, 439/654, 361/663, 361/686

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | Search ALL | Clear |

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5030128	July 1991	Herron et al.	439/372
☐	5460547	October 1995	Belt et al.	439/638
☐	5569052	October 1996	Belt et al.	439/638
☐	5604663	February 1997	Shin et al.	361/686
☐	5699226	December 1997	Cavello	361/686
	6034869	March 2000	Lin	361/686

h   e b   b   g e e e f   c   e   e   ge

☐

☐   6061234   May 2000   Broder et al.   361/686

☐   6093038   July 2000   Chen et al.   439/131

☐   6233141   May 2001   Lee et al.   361/683

ART-UNIT: 2839

PRIMARY-EXAMINER: Patel; Tulsidas C.

ABSTRACT:

A media docking station and is provided. A detachable media-content-receiving receiving component (MCRC) includes a connector that mates with a connection port of a docking base. The connection port operationally receives the connector. The docking base is equipped with a plurality of communications ports for communicating media content to a receiving devices inputted thorough said communications ports. In an alternative embodiment, an adapter is provided for mating a conventional MCRC with a base member.

37 Claims, 9 Drawing figures

h   e b   b g e e e f   c   e   e ge

☐ Generate Collection   Print

L7: Entry 3 of 36   File: PGPB   Mar 18, 2004

DOCUMENT-IDENTIFIER: US 20040054623 A1
TITLE: Mobile lottery terminal including features facilitating use by visually
impaired ticket agents

Detail Description Paragraph:
[0041] Street retailers may carry the handheld terminal for several hours before
resting. Thus, even a lightweight device will become a burden after several hours.
For this reason, a mounting device is included to facilitate the mounting of the
terminal. The mounting device may be located on the terminal in a position that
does not interfere with the connection of the terminal to any peripheral (such as a
docking station), e.g., on the end of the device opposite the location of the I/O
ports. Alternatively., mounting hardware may be removable to facilitate docking. It
will be appreciated that many different possible mounting configurations and types
of hardware may be employed. For example, Velcro, clips, rings, etc may be attached
to the housing of the terminal and used to attach the terminal to a belt or
shoulder strap. Alternatively, loops through which a belt may be threaded may be
attached or integrally molded as part of the housing. Other forms of attachment may
also be employed, e.g., the device may be held in a partially enclosed pouch on a
belt or shoulder strap that still leaves the keypad, customer input devices, and
printer accessible.

h   e b   b cg b   cc   e

        L7: Entry 3 of 36   File: PGPB   Mar 18, 2004

PGPUB-DOCUMENT-NUMBER: 20040054623
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040054623 A1

TITLE: Mobile lottery terminal including features facilitating use by visually
impaired ticket agents

PUBLICATION-DATE: March 18, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Collins, Christopher	Lincoln	RI	US	
Businger, Kurt	Warwick	RI	US	
Hultzman, Scott	Putnam	CT	US	
Romano, Kevin	Barcelona	MA	ES	
Letiecq, Dana	Millbury		US	

APPL-NO: 10/ 453772   [PALM]
DATE FILED: June 2, 2003

RELATED-US-APPL-DATA:
Application is a non-provisional-of-provisional application 60/386506, filed June
5, 2002,
Application is a non-provisional-of-provisional application 60/435434, filed
December 20, 2002,

INT-CL: [07] G06 F 17/60

US-CL-PUBLISHED: 705/039
US-CL-CURRENT: 705/39

REPRESENTATIVE-FIGURES: 5

ABSTRACT:

A mobile lottery terminal is disclosed. The mobile lottery terminal includes a
processor. The mobile lottery terminal may include a Braille keypad in
communication with the processor. The mobile lottery terminal may also include a
customer information input device in communication with the processor and operable
to input information indicative of a customer-selected lottery number. A system
incorporating mobile lottery terminals and method of vending lottery tickets using
mobile lottery terminals is also disclosed.

PRIORITY CLAIM AND RELATED APPLICATIONS

[0001] This application claims priority from previously filed U.S. provisional

patent applications No. 60/386,506 filed Jun. 5, 2002 and No. 60/435,434 filed Dec. 20, 2002. Both of these provisional applications are incorporated by reference in the present application in their entirety. A related U.S. utility application, Method and Device for Data Input, naming Christopher Collins et al as inventors, is being filed concurrently with the present application.

h   e b   b g ee e f   c   e   e ge

L7: Entry 29 of 36   File: USPT   Jan 26, 1999

DOCUMENT-IDENTIFIER: US 5864708 A
TITLE: Docking station for docking a portable computer with a wireless interface

Brief Summary Text (4):
One way to increase the versatility of portable computers is to provide for a
docking station. The docking station when connected to a portable computer provides
for a number of different types of ports. These ports are used, for example, to
drive a large monitor, communicate with various peripherals provide connection to a
network, and so on. See for example, U.S. Pat. No. 5,283,714 issued to Collins
Tsai, et al, for "Docking Apparatus for a Portable Computer."

Brief Summary Text (10):
For example, in one embodiment of the present invention, the docking station
includes a port for an input/output bus interface. The translation manager includes
a bus generator which generates control and data signals for the input/output bus
interface.

CLAIMS:

7. A portable computing system as in claim 6:

wherein the docking station additionally includes a port for an input/output bus
interface; and

wherein the second translation manager additionally includes a bus generator which
generates control and data signals for the input/output bus interface.

18. A docking station as in claim 17,

wherein the docking station additionally includes a port for an input/output bus
interface, and

wherein the translation manager additionally includes a bus generator which
generates control and data signals for the input/output bus interface.

h   e b   b cg b   cc   e

First Hit   Fwd Refs   Previous Doc   Next Doc   Go to Doc#

□   Generate Collection | Print |

L7: Entry 29 of 36   File: USPT   Jan 26, 1999

US-PAT-NO: 5864708
DOCUMENT-IDENTIFIER: US 5864708 A

TITLE: Docking station for docking a portable computer with a wireless interface

DATE-ISSUED: January 26, 1999

INVENTOR-INFORMATION:
NAME   CITY   STATE   ZIP CODE   COUNTRY
Croft; Daniel I.   Monmouth   OR   97361
May; Gregory J.   Corvallis   OR   97330
Hergett; Randy W.   Philomath   PA   97370
Stephens; Charles S.   Corvalis   OR   97330

APPL-NO: 08/ 650668   [PALM]
DATE FILED: May 20, 1996

INT-CL: [06] G06 F 13/00

US-CL-ISSUED: 395/821; 395/892, 395/882, 395/500, 395/281, 370/521, 359/152
US-CL-CURRENT: 710/1; 370/521, 398/115, 398/118, 398/163, 710/303, 710/62, 710/72

FIELD-OF-SEARCH: 395/283, 395/825, 395/282, 395/821-892, 395/500, 370/821, 389/152-164

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | | Search ALL | | Clear |

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
□	4734874	March 1988	Hwang et al.	364/708
□	5127050	June 1992	Takahashi et al.	379/428
□	5142446	August 1992	Tanaka et al.	361/393
□	5209583	May 1993	Lewis et al.	400/88
□	5227953	July 1993	Lindberg et al.	361/393
□	5237663	August 1993	Srinivasan	395/325
□	5245169	September 1993	Nakano	235/486
□	5283714	February 1994	Tsai et al.	361/683
□	5375226	December 1994	Sano et al.	395/500

h   e b   b g e e e f c   e   e ge

	5430567	July 1995	Shaw et al.	359/107
	5465038	November 1995	Register	320/2
	5493542	February 1996	Odelid	368/10
	5546211	August 1996	Devon	395/154
	5559501	September 1996	Barzegar et al.	340/825
	5561446	October 1996	Montlick	345/177
	5598539	January 1997	Gephardt et al.	395/281
	5600471	February 1997	Hirohashi et al.	359/152
	5617236	April 1997	Want et al.	359/172
	5628055	May 1997	Stein	455/89
	5632020	May 1997	Gephardt et al.	395/283
	5668566	September 1997	Yen	345/2
	5668977	September 1997	Swanstrom et al.	395/500
	5675524	October 1997	Bernard	364/705.05
	5682379	October 1997	Mahany et al.	370/311
	5687717	November 1997	Halpern et al.	128/630
	5699226	December 1997	Cavello	361/686
	5701302	December 1997	Geiger	370/521
	5724168	March 1998	Oschmann et al.	359/172
	5794164	August 1998	Beckert et al.	701/1

ART-UNIT: 272

PRIMARY-EXAMINER: Shin; Christopher B.

ABSTRACT:

A docking station for a portable computer includes a wireless transceiver for
wireless communication with the portable computer. The docking station also
includes a plurality of ports. Each port includes a physical connector for
connection to, for example, one or more peripheral devices, a network or a monitor.
A translation manager within the docking station manages translation of information
transferred between the wireless transceiver and the plurality of ports.

31 Claims, 12 Drawing figures

h   e b   b g ee ef c   e   e ge

L5: Entry 14 of 23   File: USPT   Jul 27, 2004

DOCUMENT-IDENTIFIER: US 6767253 B1
TITLE: Media-component docking system

Abstract Text (1):
A media docking station and is provided. A detachable media-content-receiving
receiving component (MCRC) includes a connector that mates with a connection port
of a docking base. The connection port operationally receives the connector. The
docking base is equipped with a plurality of communications ports for communicating
media content to a receiving devices inputted thorough said communications ports.
In an alternative embodiment, an adapter is provided for mating a conventional MCRC
with a base member.

Brief Summary Text (14):
In another aspect of the invention, an MCRC-docking system is provided. A
detachable MCRC is equipped with a connector. A docking base has a connection port
and can operationally receive the connector on the MCRC. Again, the docking base
has a plurality of communications ports for communicating media content to a
receiving device.

CLAIMS:

12. A docking base comprising: a communications port for operationally coupling a
media-content-receiving component (MCRC) to the docking base and communicating
media content from an external source through the MCRC to a receiving device; a
media-input port for receiving the media content; and a media-output port for
communicating the media content to the receiving device; wherein the media-input
port and the media-output port are coupled together to provide a loop-through
pathway in the absence of the MCRC, the loop-through pathway allowing all or a
portion of the media content to be communicated from the media-input port through
the media-output port to the receiving device in the absence of the MCRC.

31. A docking structure comprising: a docking base having a first plurality of
communications ports including a coaxial-connector port on an interior face coupled
to a second plurality of communications ports on an exterior face, said first
plurality of communications ports including a coaxial-connector port and situated
to operationally receive a conventional media-content-receiving component (MCRC)
and said second plurality of communications ports adapted to communicate media
content though said docking base and said MCRC to a receiving device.

33. A method for providing for the communication of media content from a media
source to a receiving device, comprising: providing a media-content-receiving
component (MCRC) adapter having a first face and a second face, said first face
having a first plurality of communications ports for operationally attaching said
adapter to an MCRC and said second face having a connector coupled to said first
plurality of communications ports; and providing a docking base having an interior
and exterior face, said exterior face having a second plurality of communications
ports for communicating media content to a receiving device and said interior face
having a connection port for receiving said adapter via said connector.

37. A detachable media-content-receiving component (MCRC) comprising: a

h   e b   b cg b   cc   e